Press Office
U.S. Department of Homeland Security

Fact Sheet

Route Diversity Project (RDP)

Purpose: Develop a Route Diversity Methodology (RDM) and a Route Diversity Analysis capability to analyze Federal agencies' telecommunications resiliency/redundancy. Research/demonstrate various technical approaches to provide this service.

Background: Originally a White House directed Backup Dial Tone study, begun soon after the events of September 11, 2001, the Route Diversity Project (RDP) initially consisted of detailed engineering, cost analyses, and the demonstration of alternative technologies for eliminating single points of failure at critical Federal facilities in a 9-11 type scenario. This project has expanded to include creation of a robust yet straightforward assessment process to rapidly and accurately evaluate Federal agencies' existing telecommunications infrastructures and develop solutions to meet the principle of route diversity (communications routing between two points over more than one physical path, with no points in common).

Highlights: Concurrently in Phases III and IV, and due to begin Phase V shortly, the NCS researches and demonstrates technologies, e.g., Free Space Optics (FSO) and wireless transport technologies, to assess their potential to backup primary telecommunications. Environmental stress testing of several FSO units was conducted at the National Institute for Standards and Technology (NIST) in October 2005; future testing of emerging wireless transport technologies will continue in partnership with other Federal agencies. In response to an OMB memorandum in June 2005, an abridged RDM was developed to enable Federal agencies to self-assess their own telecommunications infrastructures in support of continuity of operations (COOP) planning. A more in-depth assessment is available as a modeling and analysis service through the NCS.

❒ Phase I/II – Develop generic architectures based on a sample set of key federal facilities and identify vulnerabilities associated with those architectures; interview Federal agencies regarding actual facility architectures and problems encountered because of the September 11th attacks; provide recommendations based on interviews and develop technological solutions (completed).
❒ Phase III – Research/demonstrate technological solutions that can be used to mitigate vulnerabilities and enhance robustness of wireline networks used by federal agencies (ongoing).
❒ Phase IV – Create an assessment process to rapidly and accurately evaluate existing telecommunications infrastructures to determine gaps in physical routing diversity (single facility RDM complete; campus environment RDM ongoing); research options and develop guidelines to mitigate those gaps (ongoing).
❒ Phase V – Establish commercial service evaluation criteria, develop commercial service architecture templates, and establish tiered response procedures to enable specification, procurement, and deployment of network infrastructure solutions to support the NCS-sponsored Emergency Support Function-2 (ESF-2) recovery/network restoration in post-disaster scenarios (scheduled to begin August 2006).

Contact Information: Additional information may be obtained by contacting the Chief, Modeling, Analysis, and Technology Assessment Branch. Telephone: (703) 607-6124 ♦ Fax: (703) 607-4830 ♦ Web: http://www.ncs.gov